SLR Systems

Z80DIS

Z80 DISASSEMBLER PROGRAM FOR Z80 CP/M USERS

HIGH PERFORMANCE SOFTWARE

SLR Systems disassembler for Z80 based CP/M systems is the perfect complement to the assemblers and linkers in this development tool set. Using a standard COM file as input, Z80DIS produces a syntactically correct source code file suitable for analysis, modification and subsequent reassembly. The power, flexibility, and ease of use that characterize this package makes it the perfect choice for programmers of all experience levels. Whether you intend to use Z80DIS to produce a source listing of your word processing package to learn assembly language "by example", or to produce a listing of your BIOS so that you can optimize it's disk buffering techniques, you will appreciate the features that set Z80DIS apart from similar packages.

Standard features include automatic comment generation for CP/M system calls, automatic generation of define byte sequences for illegal instructions, automatic label generation for all referenced addresses and cross reference table output available in either alphabetical or numerical sequence. Output from the package can be directed to the console, printer, disk or any combination of these devices simultaneously.

Z80DIS will save you lots of time too! Besides being written in highly optimized Z80 assembly language for super-fast execution speed, it automatically inserts information in the comment field that will speed up your deciphering of the listing produced. All 8 bit immediate operands, for example, are flagged with their ASCII mnemonic codes, (eg. LD A, 0Dh ; CR).

Z80DIS also makes use of a user supplied external definition file which allows you to assign meaningful label names to referenced memory locations. You can also designate groups of addresses to be treated as DB's, DW's and DS's, to produce clean output where text messages and numeric data are encountered.

The Z80DIS package comes with two useful utility programs, DUMP and RAMCOM. DUMP produces a hexadecimal and ASCII dump of a (COM) file that you can use in the development of your external definition file. DUMP enables you to quickly scan the binary file for the occurance of obvious data areas embedded in the object code. RAMCOM complements the disassembler's environment by allowing you to save any range of memory addresses to a disk file for subsequent disassembly.

Z80DIS Sample Output With and Without External Definitions

Without Definition File:

```
        ORG     0100H

L0100
        LD      DE,L010E
        LD      C,09H           ;HT
        CALL    0005H           ;PRNTSTG
        LD      IX,(0001H)
        JP      (IX)
L010E
        LD      D,H
        LD      L,B
        LD      L,C
        LD      (HL),E
        JR      NZ,L0184
        LD      (HL),D
        LD      L,A
        LD      H,A
        LD      (HL),D
        LD      H,C
        .       .
        .       .
        .       .
```

With External Definitions:

```
0000                    00001           ORG   0100H
0100                    00002
0100                    00003 CPM       EQU   0005H
0100                    00004
0100                    00005 START:
0100  11 0E 01          00006           LD    DE,MESSAGE
0103  0E 09             00007           LD    C,09H             ;HT
0105  CD 05 00          00008           CALL  CPM               ;PRNTSTG
0108  DD 2A 01 00 00009                 LD    IX,(0001H)
010C  DD E9             00010           JP    (IX)
010E                    00011 MESSAGE:
010E  54 68 69 73 00012                 DEFB  54H,68H,69H,73H,20H,70H ; This p
0114  72 6F 67 72 00013                 DEFB  72H,6FH,67H,72H,61H,6DH ; rogram
011A  20 6A 75 73 00014                 DEFB  20H,6AH,75H,73H,74H,20H ;  just
0120  61 62 6F 72 00015                 DEFB  61H,62H,6FH,72H,74H,73H ; aborts
0126  24                00016           DEFB  24H                     ; $
0127                    00017           END

Label   Value   Referenced

CPM     0005    00003 00008
MESSAGE 010E    00006 00011
START   0100    00005
L0001   0001    00009
```

SPECIAL FEATURES

- ☐ Written in highly-optimized Z80 assembly language
- ☐ Output directed to console, printer, or disk, or any combination at once.
- ☐ Sophisticated error handling
- ☐ Comprehensive User's Manual
- ☐ Generates ASCII mnemonics in comment field for 8-bit immediate operands.
- ☐ For CP/M applications, generates 6 or 7 characters labels for the first 40 system calls.

SPEED

When other disassemblers give you time to brew and drink a pot of coffee, Z80DIS will keep you on your toes. Using a 4MHZ Z80 with 8" SSSD disks (no fancy track buffering in BIOS) Z80DIS will disassemble a typical 17K COM file, and generate a 110K Z80 file, with over 10,000 lines of source, and a 52K XRF file in ***less than 1 minute 45 seconds.***

That's a tough mark to beat even without all these features!

FEATURE CHECKLIST

- ☑ Speed
- ☑ Flexibility
- ☑ Performance
- ☑ Price
- ☑ Error Handling
- ☑ Ease of Use
- ☑ Documentation

SYSTEM REQUIREMENTS

CP/M version requires a Z80 processor, CP/M at least version 2.2 and we recommend at least 32K RAM.

TECHNICAL SPECIFICATIONS

- ☐ Runs on Z80 CP/M
- ☐ Generate ZILOG mnemonics
- ☐ Two Pass operation - generates labels only at referenced locations
- ☐ Optional external definition file allows user-defined labels up to 8 characters
- ☐ Generates define byte, define word and define space areas as defined in external file
- ☐ Generates ASCII equivalent in comment field for immediate byte operands
- ☐ Generates EQU statements for undefined labels
- ☐ Illegal instructions automatically generate define byte sequence
- ☐ Optional cross-reference provides list of symbols, values, and line numbers on which referenced
- ☐ Handles disk-full errors (allows disk swapping)
- ☐ Output to console, list or disk devices in any combination
- ☐ Generates mnemonics for CP/M system calls
- ☐ Start and stop at any location in file
- ☐ Binary buffered in RAM on first pass for increased speed
- ☐ COM file can start at other than 100H

COMPLETE PACKAGE

The Z80DIS package includes Z80DIS itself (about a 9K binary file) and a very useful file dump utility on one diskette, and a user's manual containing over 25 pages.

For additional information on our complete family of development tools, call or write:

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